

**Amendments to the Drawings:**

The attached set of drawings includes new FIGs. 4 and 5.

**REMARKS**

The Final Office Action mailed March 13, 2006 has been received and reviewed. Claims 13 through 26, and 33 through 45 are currently pending in the application. Claims 13 through 26, and 33 through 45 stand rejected. Applicant proposes to amend claims 13, 17, 20, and 25. No new matter is added. Reconsideration is respectfully requested.

**Objection to the Drawings**

The drawings were objected to under 37 C.F.R. §1.83(a) as allegedly failing to show every feature of invention specified in the claims. Applicant submits a new drawing sheet with new FIGs. 4 and 5 which depict the etchant dispenser or cathode assembly moving relatively to one another and the nozzle moving linearly over the cathode assembly. Support for the new drawings may be found in the as-filed specification including, for example, page 8, lines 3-5 and lines 25-26. No new matter was added. Reconsideration and withdraw of the objection is requested.

**Amendments to the Specification**

The specification was amended on page 8, lines 3-5 and lines 25-26 to include reference numerals and reference to new drawing FIGs. 4 and 5. Additionally, minor grammatical corrections were made. No new matter was added.

**35 U.S.C. § 103(a) Obviousness Rejections**

Obviousness Rejection Based on Applicant's Admitted Prior Art in view of U.S. Patent No. 6,683,007 to Yamasaki et al. in further view of U.S. Patent No. 5,700,176 to Potter

Claims 13 through 21, 24 and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Yamasaki et al. (U.S. Patent No. 6,683,007) in further view of Potter (U.S. Patent No. 5,700,176). Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

Yamasaki discloses a method of etching a semiconductor wafer. The semiconductor is rotated in a horizontal plane while the etchant is dispensed from a nozzle toward the peripheral surface of the semiconductor wafer. (Yamasaki, Abstract). Potter discloses a method of manufacturing a field emission device. Applicant respectfully submits that the combination of admitted prior art, Yamasaki and Potter fails to teach or suggest each and every element of the presently claimed invention.

By way of contrast with the cited art, claim 13 of the presently claimed invention recites a "method of making an FED having a central active display area and a surrounding peripheral area, comprising: making a cathode assembly; applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying and applying the etchant within 200 microns of the structure; making an anode assembly, and assembling said cathode and anode assemblies." Support for the amendment may be found throughout the as-filed specification including, for example, page 8, lines 5-7.

Applicant respectfully submits that the proposed combination of references fails to teach or suggest "applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying and applying the etchant within 200 microns of the structure." Instead, the cited art lacks any teaching or suggestion of applying etchant within 200 microns of a structure as recited in claim 13 of the presently claimed invention. As the combination of admitted prior art,

Yamasaki and Potter fails to teach or suggest each and every element of the presently claimed invention, Applicant respectfully submits claim 13 as proposed to be amended is not rendered obvious by the cited art. Accordingly, claim 13 is allowable.

Claims 14-16 and 33-36 are further allowable as depending, either directly or indirectly, from allowable claim 13.

Claim 33 is further allowable as the cited art fails to teach or suggest “moving the etchant dispenser relative to the cathode assembly” while applying etchant. Instead, Yamasaki discloses the etchant dispenser is stationary while the wafer is moved. Potter and the admitted prior art lack any similar disclosure.

Claim 35 is further allowable as the cited art fails to teach or suggest “applying the etchant on the bond pads in elongated spray zones.”

Claim 36 is further allowable as the cited art fails to teach or suggest “spraying the etchant from a nozzle in the etchant dispenser while moving the nozzle linearly over the cathode assembly.” Instead, Yamasaki discloses the etchant dispenser is stationary while the wafer is moved. Potter and the admitted prior art lack any similar disclosure.

Independent claims 17, 20 and 25 are each allowable for at least the same reasons as allowable claim 13. The cited art lacks any teaching or suggestion of applying etchant within 200 microns of a structure. Each of claims 17, 20 and 25 include a similar recitation of “locally applying an etchant to uncover a structure in the peripheral region of the anode assembly, including moving an etchant dispenser or the anode assembly relative to one another during the applying and applying the etchant within 200 microns of the structure.” As the cited art fails to teach or suggest every element of claim 17, 20 or 25 of the presently claimed invention, the cited art cannot render claims 17, 20 and 25 obvious. Accordingly, claims 17, 20 and 25 are allowable.

Claims 18-19 and 37 – 41 are each allowable as depending, either directly or indirectly, from allowable claim 17.

Claim 37 is further allowable as the cited art fails to teach or suggest moving the etchant dispenser relative to the anode assembly. Instead, Sandhu discloses applying the etchant while the dispenser 21 and the wafer 11 are both stationary. (Sandhu, col. 3, lines 1-6). Potter and the

admitted prior art lack any similar disclosure.

Claim 41 is further allowable as the cited art fails to teach or suggest spraying the etchant from a nozzle in the etchant dispenser while moving the nozzle linearly over the cathode assembly. Instead, Yamasaki discloses the etchant dispenser is stationary while the wafer is moved. Potter and the admitted prior art lack any similar disclosure.

Claims 21-24 and 42-43 are each allowable as depending, either directly or indirectly, from allowable claim 20.

Claim 42 is further allowable as the cited art fails to teach or suggest moving the etchant dispenser relative to the substrate. Instead, Yamasaki discloses the etchant dispenser is stationary while the wafer is moved. Potter and the admitted prior art lack any similar disclosure.

Claims 26, 44 and 45 are each allowable as depending, either directly or indirectly, from allowable claim 25.

Claim 44 is further allowable as the cited art fails to teach or suggest moving the etchant dispenser relative to the substrate. Instead, Yamasaki discloses the etchant dispenser is stationary while the wafer is moved. Potter and the admitted prior art lack any similar disclosure.

Obviousness Rejection Based on Applicant's Admitted Prior Art in view of U.S. Patent No. 6,202,658 to Fishkin et al. in further view of U.S. Patent No. 5,700,176 to Potter

Claims 13 through 26 and 33 through 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Fishkin et al. (U.S. Patent No. 6,202,658) in further view of Potter (U.S. Patent No. 5,700,176). Applicant respectfully traverses this rejection, as hereinafter set forth.

Fishkin discloses a device for cleaning a semiconductor wafer. Potter discloses a method of manufacturing a field emission device. Applicant respectfully submits that the combination of admitted prior art, Fishkin and Potter fails to teach or suggest each and every element of the presently claimed invention.

By way of contrast with the cited art, claim 13 of the presently claimed invention recites a "method of making an FED having a central active display area and a surrounding peripheral area, comprising: making a cathode assembly; applying an etchant locally to uncover a structure

in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying and applying the etchant within 200 microns of the structure; making an anode assembly, and assembling said cathode and anode assemblies.” Support for the amendment may be found throughout the as-filed specification including, for example, page 8, lines 5-7.

Applicant respectfully submits that the proposed combination of references fails to teach or suggest “applying an etchant locally to uncover a structure in the peripheral area of the cathode assembly, including moving an etchant dispenser or the cathode assembly relative to one another during the applying and applying the etchant within 200 microns of the structure.” Instead, the cited art lacks any teaching or suggestion of applying etchant within 200 microns of a structure as recited in claim 13 of the presently claimed invention. As the combination of admitted prior art, Fishkin and Potter fails to teach or suggest each and every element of the presently claimed invention, Applicant respectfully submits claim 13 as proposed to be amended is not rendered obvious by the cited art. Accordingly, claim 13 is allowable.

Claims 14-16 and 33-36 are further allowable as depending, either directly or indirectly, from allowable claim 13.

Independent claims 17, 20 and 25 are each allowable for at least the same reasons as allowable claim 13. The cited art lacks any teaching or suggestion of applying etchant within 200 microns of a structure. Each of claims 17, 20 and 25 include a similar recitation of “locally applying an etchant to uncover a structure in the peripheral region of the anode assembly, including moving an etchant dispenser or the anode assembly relative to one another during the applying and applying the etchant within 200 microns of the structure.” As the cited art fails to teach or suggest every element of claim 17, 20 or 25 of the presently claimed invention, the cited art cannot render claims 17, 20 and 25 obvious. Accordingly, claims 17, 20 and 25 are allowable.

Claims 18-19 and 37 – 41 are each allowable as depending, either directly or indirectly, from allowable claim 17.

Claims 21-24 and 42-43 are each allowable as depending, either directly or indirectly, from allowable claim 20.

Claims 26, 44 and 45 are each allowable as depending, either directly or indirectly, from allowable claim 25.

### ENTRY OF AMENDMENTS

The proposed amendments to claims 13, 17, 20, and 25 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search. Finally, if the Examiner determines that the amendments do not place the application in condition for allowance, entry is respectfully requested upon filing of a Notice of Appeal herein.

### CONCLUSION

Claims 13-26 and 33-45 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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Attachment: New Drawing Sheet to include Figures 4 & 5

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